

WE CLAIM

1. A method of providing signaling in a communication link between a sending node and a receiving node, characterized in that

5           the signaling contains a predetermined bit pattern that indicates whether control information in the current transmission can be used alone for decoding, or whether some part of the control information from an earlier transmission must also be used.

10           2. A method according to claim 1, wherein a transport format combination indicator (TFCI) in the current transmission contains the control information.

15           3. A method according to claim 1, wherein a transport format combination indicator (TFCI) in the current transmission contains the predetermined bit pattern.

20           4. A method according to claim 1, wherein the communication link is based on using a hybrid automatic repeat request (HARQ) protocol.

25           5. A method according to claim 1, wherein the some part of the information is from the earlier transmission of the same block.

6. A method according to claim 1, wherein the signaling is used for decoding a transport channel being sent in the communications link.

5           7. A method according to claim 1, wherein the communication link is an uplink or a downlink.

8. A method according to claim 1, wherein the sending node is user equipment and the receiving node is  
10 a node B in an uplink.

9. A method according to claim 1, wherein the sending node is a Node B and the receiving node is user equipment in a downlink.

15           10. A method according to claim 1, wherein the predetermined bit pattern consists of only one bit.

11. A method according to claim 1, wherein the predetermined bit pattern consists of more than one bit  
20 in a predetermined pattern, including a bit pattern of "00" or "11".

12. A method according to claim 3, wherein the TFCI  
25 contains one bit in the form of a TFCI flag indicating how to decode data blocks in a current data frame.

13. A method according to claim 1, wherein a

separate dedicated control channel contains the  
predetermined bit pattern.

5        14. A method according to claim 10, wherein if the  
one bit is a logical "1", then the receiving node uses a  
transport format combination indicator (TFCI) in the  
current transmission for decoding, i.e. the number of  
information bits for this transport format equals the  
number that is defined also originally when the TFCI was  
10       defined.

15       15. A method according to claim 10, wherein if the  
one bit is a logical "0", then using only the number of  
channel bits from a transport format combination  
indicator (TFCI) in the current transmission for  
decoding, such that the receiving node assumes the same  
number of information bits for this transport format as  
in the earlier transmission, thus using partly current  
control information and partly earlier control  
20       information.

16. A method according to claim 15, wherein the data  
is discarded if there is no earlier transmission.

17. A method according to claim 15, wherein if the earlier transmission of the transport channel exists, then the number of information bits are taken from the earlier transmission.

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18. A method according to claim 1, wherein an acknowledgement (ACK) is sent depending on the outcome of the decoding.

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19. A method according to claim 1, wherein a no-acknowledgement (NAK) is either sent or not sent depending on the outcome of the decoding.

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20. A method according to claim 12, wherein the method includes the steps of:

reading the TFCI flag; and

if the TFCI flag is equal to a logical "1", using all rate matching (RM) parameters from the TFCI and decoding data in the transport channel.

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21. A method according to claim 20, wherein the method includes the step of sending an acknowledgement (ACK) if the decoding is successful.

22. A method according to claim 20, wherein the method includes the steps of sending a no-acknowledgement (NAK) if the decoding is not successful and storing the rate matching (RM) parameters.

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23. A method according to claim 12, wherein the method includes the steps of

if the TFCI flag is equal to a logical "0", using only the number of channel bits;

10       if the earlier transmission is available, getting the number of information bits from the earlier transmission; and

15       if the earlier transmission is not available, then discarding the data since the RM parameters are not available and sending a non-acknowledgement.

24. A method according to claim 1, wherein the method further comprises implementing the step of the method via a computer program running in a processing means in an uplink/downlink dedicated channel transmission module of either the sending node or the receiving node.

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25. A computer program product with a program code, which program code is stored on a machine readable carrier, for carrying out steps for providing signaling in a communication link between a sending node and a

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receiving node, the signaling containing a predetermined bit pattern that indicates whether control information in the current transmission can be used alone for decoding, or whether some part of the control information from an earlier transmission must also be used, when the computer program is run in a processing means which forms part of an uplink/downlink dedicated channel transmission module of either the sending node or the receiving node.

26. A method according to claim 1, wherein the sending node and the receiving node form part of a wireless network.

27. A receiving node for receiving signaling in a communication link with a sending node, characterized in that

the signaling contains a predetermined bit pattern that indicates whether control information in the current transmission can be used alone for decoding, or whether some part of the control information from an earlier transmission must also be used.

28. A receiving node according to claim 27, wherein a transport format combination indicator (TFCI) in the current transmission contains the control information.

29. A receiving node method according to claim 27, wherein a transport format combination indicator (TFCI) in the current transmission contains the predetermined bit pattern.

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30. A receiving node according to claim 27, wherein the communication link is based on using a hybrid automatic repeat request (HARQ) protocol.

10           31. A receiving node according to claim 27, wherein the some part of the control information is from the earlier transmission of the same block.

15           32. A receiving node according to claim 27, wherein the signaling is used for decoding a transport channel being sent in the communications link.

20           33. A receiving node according to claim 27, wherein the communication link is an uplink or a downlink.

            34. A receiving node according to claim 27, wherein the sending node is user equipment and the receiving node is a node B in an uplink.

25           35. A receiving node according to claim 27, wherein the sending node is a Node B and the receiving node is user equipment in a downlink.

36. A receiving node according to claim 27, wherein the predetermined bit pattern consists of only one bit.

5           37. A receiving node according to claim 27, wherein the predetermined bit pattern consists of more than one bit in a predetermined pattern, including a bit pattern of "00" or "11".

10           38. A sending node for providing signaling in a communication link with a receiving node, characterized in that

          the signaling contains a predetermined bit pattern that indicates whether control information in the current  
15       transmission can be used alone for decoding, or whether some part of the control information from an earlier transmission must also be used.

20           39. A sending node according to claim 38, wherein a transport format combination indicator (TFCI) in the current transmission contains the control information.

25           40. A sending node method according to claim 38, wherein a transport format combination indicator (TFCI) in the current transmission contains the predetermined bit pattern.



41. A sending node according to claim 38, wherein the communication link is based on using a hybrid automatic repeat request (HARQ) protocol.

5           42. A sending node according to claim 38, wherein the some part of the control information is from the earlier transmission of the same block.

          43. A sending node according to claim 38, wherein the signaling is used for decoding a transport channel  
10           being sent in the communications link.

          44. A sending node according to claim 38, wherein the communication link is an uplink or a downlink.

15           45. A sending node according to claim 38, wherein the sending node is user equipment and the receiving node is a node B in an uplink.

          46. A sending node according to claim 38, wherein  
20           the sending node is a Node B and the receiving node is user equipment in a downlink.

          47. A sending node according to claim 38, wherein the predetermined bit pattern consists of only one bit.

25           48. A sending node according to claim 38, wherein the predetermined bit pattern consists of more than one

bit in a predetermined pattern, including a bit pattern of "00" or "11".

49. A system having a sending node for providing signaling in a communication link with a receiving node, characterized in that

the signaling contains a predetermined bit pattern that indicates whether control information in the current transmission can be used alone for decoding, or whether some part of the control information from an earlier transmission must also be used.

50. A system according to claim 49, wherein a transport format combination indicator (TFCI) in the current transmission contains the control information.

51. A system method according to claim 49, wherein a transport format combination indicator (TFCI) in the current transmission contains the predetermined bit pattern.

52. A system according to claim 49, wherein the communication link is based on using a hybrid automatic repeat request (HARQ) protocol.

53. A system according to claim 49, wherein the some part of the control information is from the earlier

transmission of the same block.

54. A system according to claim 49, wherein the signaling is used for decoding a transport channel being sent in the communications link.

55. A system according to claim 49, wherein the communication link is an uplink or a downlink.

56. A system according to claim 49, wherein the sending node is user equipment and the receiving node is a node B in an uplink.

57. A system according to claim 49, wherein the sending node is a Node B and the receiving node is user equipment in a downlink.

58. A system according to claim 49, wherein the predetermined bit pattern consists of only one bit.

59. A system according to claim 49, wherein the predetermined bit pattern consists of more than one bit in a predetermined pattern, including a bit pattern of "00" or "11".

60. A system according to claim 49, wherein the system is a communication system.